

PCT/EP2004/005860

New claims

1. A kit for producing frame structures for switchgear cabinets, consisting of

a) a cabinet rack (30) made of four horizontal broad struts (31), four horizontal depth struts (32), as well as four vertical frame legs (33) of a preset width, depth and height,

b) plate-shaped cover elements (20), which have on two opposite sides fastening edges (23) beveled at right angles with at least one row of fastening receivers (23.1, 23.2);

c) vertical frames (10) made of two vertical profiled frame elements (11) and two horizontal broad frame struts (12), which can be installed in the cabinet rack (30), wherein they can be connected with the depth struts (32), or can be attached at different spacings by means of base profiled sides (11.3) of the vertical profiled frame elements (11) to the insides of the fastening edges (23) of the cover elements (20) and, with cover elements (20) used as bottom element and top element, form an independent basic rack (60),

d) at least one cabinet door (80), which is beveled on its circumference and can be hinged to the cover elements (20).

2. The kit in accordance with claim 1, characterized in that

the broad struts (31), the depth struts (32) and the frame legs (33) of the cabinet rack (30) are formed as sections of respectively identical profiled elements, which are fixedly connected with each other, for example welded together, in the corner areas of the switchgear cabinet rack

(30) by means of corner connectors (40).

3. The kit in accordance with claim 1,
characterized in that

the broad struts (31) and the depth struts (32) of the
switchgear cabinet rack (30) form a solid bottom frame and a
solid cover frame (35) and

the vertical frame legs (33), together with the corner
connectors (40) form a continuous exterior receiver (36) in
the corner areas of the bottom and the top frame (35).

4. The kit in accordance with one of claims 1 to 3,
characterized in that

the vertical profiled frame elements (11) of the
vertical frames (11) have a profiled base side (11.3) with at
least one row of fastening receivers (11.4), which terminate
with the front faces of the horizontal broad vertical struts
(12) of the vertical frames (10), and

lateral legs (11.1 and 11.6) are beveled off on both
sides of the profiled base side (11.3), which are oriented to
the longitudinal sides of the associated horizontal broad
frame struts (12) of the vertical frames (10) and are
connected with them.

5. The kit in accordance with claim 4,
characterized in that

at least one row of identical fastening receivers is
cut in a uniform aligned graduation into the profiled base
side (11.3) and the beveled lateral legs (11.1 and 11.6) of
the vertical profiled frame elements (11) of the vertical
frames (10).

6. The kit in accordance with claim 4,
characterized in that

at least one row of equal or identical fastening receivers (11.4, 11.2, 11.7) is cut in the same or different graduation into respectively the profiled base side (11.3) and in the beveled lateral legs (11.3 and 11.6) of the vertical profiled frame elements (11) of the vertical frames (10).

7. The kit in accordance with one of claims 1 to 6, characterized in that

the horizontal broad frame struts (12) and the vertical profiled frame elements (11) of the vertical frames (10) are fixedly connected with each other in the corner areas, for example welded together.

8. The kit in accordance with one of claims 1 to 7, characterized in that

the horizontal broad frame struts (12) of the vertical frames (10) are provided with cable guide openings (12.2), and

the two vertical frames (10) can be connected via fastening receivers (12.3) of the horizontal broad frame struts (12) with the facing tops of the horizontal depth struts (32) of the cabinet rack (30) at different distances from each other.

9. The kit in accordance with claim 8, characterized in that

the base plates (21) of the cover elements (20) are provided with cable introduction recesses (21.2) in the basic rack (60) above the horizontal broad frame struts (12) of the vertical frames (10).

10. The kit in accordance with claims 8 and 9, characterized in that

the fastening edges (23) of the cover elements (20) have connecting strips (26) beveled toward the exterior on their free edges, and protrude past the base plate (21) of the cover elements (20) over the fastening edges (23) and together with the connecting strips (26) form receivers for attaching lateral walls on the basic rack (60).

11. The kit in accordance with one of claims 8 to 10, characterized in that

the base plates (21) of the cover elements (20) protrude at the sides extending perpendicularly in respect to the fastening edges (23) and have bevels (25), on which a cabinet door can be hinged and locked, and a rear wall can be fastened.

12. The kit in accordance with one of claims 8 to 11, characterized in that

the base plates (21) of the cover elements (20) are provided with a center opening (21.2) and with fastening bores (22) in the corner areas.

13. The kit in accordance with one of claims 1 to 12, characterized in that

the cabinet rack (30) is formed of an identical bottom frame (35) and an identical top frame (35), which face each other with protruding corner connectors (40) and are connected with each other via the four vertical frame legs (33) to form the cabinet rack (30).

14. The kit in accordance with claim 13, characterized in that

the vertical frame legs (33) of the cabinet rack (30) have a profiled element with a plug-in connection (33.3) for the plug-in element (40.2) of the corner connectors (40),

wherein, together with the exterior contour, the profiled element constitutes the exterior receptacle (36), which is designed to be symmetrical in respect to the diagonal plane of the bottom and top frames (35).

15. The kit in accordance with claim 13 or 14, characterized in that

the bottom and the top frames (35) of the cabinet rack (30) have corner receivers (35.1), into which the corner connectors (40) can be placed with a filler element (40.1) and connected with the bottom or top frame (35) wherein, with their exterior contour, the filler elements (40.1) of the corner connectors (40) extend the exterior receptacles (36) of the vertical profiled frame element (33) of the cabinet rack (30) past the bottom and the top frame (35).

16. The kit in accordance with one of claims 13 to 15, characterized in that

the front sides (33.1, 33.2) of the vertical profiled frame elements (33) of the cabinet rack (30) are connected in an upright manner with the facing sides of the bottom and of the top frames (35) and the filler elements (40.1) of the corner connectors (40).

17. The kit in accordance with one of claims 13 to 16, characterized in that

the vertical profiled frame elements (33) of the cabinet rack (30) form a channel (33.0), open to the interior of the cabinet rack (30), between the bottom and the top frames (35), which can be closed by means of a profiled box (50), and

this profiled box (50) has vertical channels (50.1, 50.2) and is provided with rows of bores (50.4) in the cover wall (50.3).

18. The kit in accordance with claim 17,
characterized in that

the cover wall (50.3) of the profiled box (50) covers
the channel (33.0) in the vertical profiled frame elements
(33) of the cabinet rack (30) with covering strips (50.5).

19. The kit in accordance with one of claims 16 to 18,
characterized in that

the profiled side (33.4) of the vertical profiled frame
section (33) forming the channel (33.0) supports connecting
strips (33.5) formed on the exterior of the free profiled
side (33.6).

20. The kit in accordance with one of claims 1 to 19,
characterized in that

the cabinet door (80) is provided with a beveled edge
(82, 83), which receives hinge elements (87) with hinge bolts
(86), which can be inserted into bearing receivers (28) of
the cover elements (20) of the basic rack (60), in the corner
areas of the hinge side of the cabinet door (80), and

the hinge bolts (86) are adjustable in an axially
limited manner in the hinge elements (87) and can be fixed on
the bevel (25) of the cover elements (20) so they do not
shift, at least in the position in which they are engaged
with the facing bearing receiver (28) or bearing bushing
(29).

21. The switchgear cabinet in accordance with one of
claims 1 to 20,

characterized in that

the end edges (23.3) of the fastening edges (23) of the
cover elements (20) are set back in relation to the bevel
(25) at a minimum by an amount which at least corresponds to
the dimensions of the first door bevel (82) directed

perpendicularly to the door leaf.

22. The switchgear cabinet in accordance with one of claims 1 to 21,

characterized in that

bearing bushes (29) are inserted into the bearing receivers (28) in the bevels (25) of the cover elements (20).

23. The switchgear cabinet in accordance with one of claims 1 to 22,

characterized in that

the lock side of the cabinet door (80) has displaceable locking bars, which can be shifted manually or by means of a rod closing device and can be inserted into the bearing receivers (28) or bearing bushes (29) of the bevels (25) of the cover elements (20) of the basic rack (60), or can be moved out of them.

New claim 1

A kit for producing frame structures for switchgear cabinets, consisting of

a) a cabinet rack (30) made of four horizontal broad struts (31), four horizontal depth struts (32), as well as four vertical frame legs (33) of a preset width, depth and height,

b) two vertical frames (10) made of two horizontal broad frame struts (12) each and two vertical profiled frame elements (11) each, which can be installed in a cabinet rack (30) and connected with its depth struts (32), and

c) cover elements (20) which, as bottom element and top element, can be connected with two spaced-apart vertical frames (10) to form an independent basic rack (60), and

d) at least one cabinet door (80), which can be hinged on the cover elements (20) and is beveled on its circumference.